

CAUTION:

Prolonged exposure to sound pressure levels in excess of 100dB has been shown to contribute to permanent hearing loss and tinitis. Diamond's high performance speakers can exceed this level. Please exercise restraint in their operation.



DIAMOND™
AUDIO TECHNOLOGY

Head Office

3030 Pennsylvania Ave.
Santa Monica, CA 90404

Tel: 310.582.1121
Fax: 310.582.1502

Service Department

410 South Benson Lane
Chandler, AZ 85224

Tel: 480-813-6200
Fax: 480-813-6210

Service/ Tech Support
Toll Free 1-866-328-2834

LIMITED WARRANTY STATEMENT

Diamond Audio Technology, Inc. (DAT) warrants all DAT products to be free of defects in material and workmanship for a period of one (1) year from the date of original purchase provided they are purchased from an authorized DAT retailer in the United States. However, the effective warranty period will be three (3) years if the products were purchased from and installed by an authorized DAT retailer.

What is covered: Parts and labor to effect repair or, at the sole discretion of DAT, replacement of either any malfunctioning or defective part(s) or the entire system should the system or any component part(s) thereof fail to perform as designed. Includes return freight via ground transportation to destinations within the United States.

What is NOT covered: Installation or setup and repair or replacement of the system or any parts thereof which, in DAT's judgment, fail or become damaged as a result of negligence, improper use, abuse, unauthorized modification or service, improper or inadequate packaging during shipment, installation by a non-authorized dealer, accident, or use for any purpose other than those for which this product was originally intended, or where the model's serial number has been removed, altered or defaced.

Who is covered: Original purchaser so long as they reside in the United States and can provide proof of the original date of purchase (e.g., store receipt) from an authorized DAT retailer.

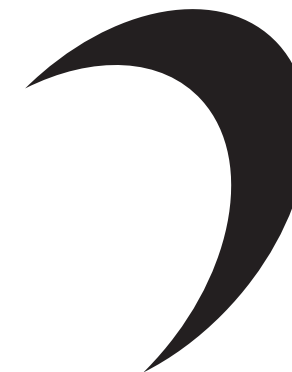
OUTSIDE THE UNITED STATES: Customers outside the United States should contact their local sales office to obtain information on prices, exchange unit availability, instructions, service and warranty/non-warranty repairs.

Repair or replacement under this warranty is the exclusive remedy of the consumer. DAT shall not be liable for any incidental or consequential damages for breach of any expressed or implied warranty on this product. Except to the extent prohibited by applicable law, any implied warranty of merchantability or fitness for a particular purpose on this product is limited in duration to the duration of this warranty. Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights that may vary from state to state.

How to obtain warranty service: In the event a DAT product should require servicing, you should (a) visit an authorized DAT retailer or (b) call the DAT Service Dept. at (866) 328 2834. To be eligible for warranty service within a three (3) year period, the accompanying receipt of original purchase from an authorized DAT retailer must specifically note that dealer installation was provided.

Product returned for repair/service must be properly packaged and clearly marked with the Return Authorization (RA) number issued by DAT. If the RA number is not clearly marked on the package or no RA number was issued by DAT, the product may be refused upon delivery. DAT does not assume responsibility for lost or misdirected product.

<http://www.diamondaudio.com>



DIAMOND™
AUDIO TECHNOLOGY

TDX
SERIES

SUBWOOFER OWNER'S MANUAL

TDX 10D2 - TDX 10D4
TDX 12D2 - TDX 12D4
TDX 15D2 - TDX 15D4

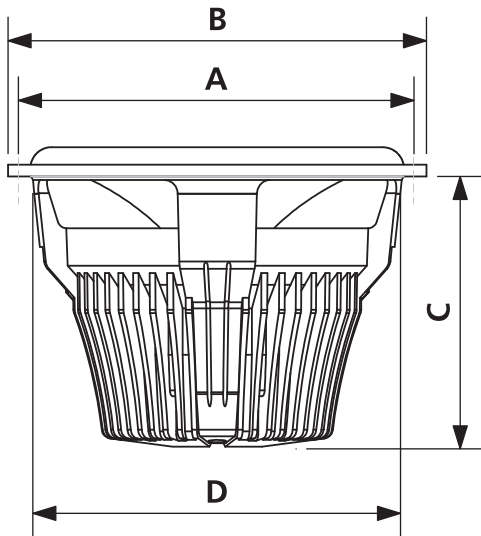
INTRODUCTION

The truly revolutionary Diamond TDX subwoofer is in a performance class of its own. This subwoofer is the first driver that truly bridges the gap between competition SPL demands and audiophile SQ requirements. Suited for use in virtually all types of enclosures, the TDX sub-woofers will satisfy all tastes and applications. The design of this woofer is completely unique. From the massive voice coil to the assembly methodology through the use of an encapsulated neodymium motor structure contained within a frame/heat sink, this woofer introduces completely new thinking for high power, high excursion subwoofers.

FEATURES

- Massive dual copper voice coils with insulation wound on hard anodized aluminum former.
- Proprietary composite sandwich cone technology; ultra light and rigid.
- NBR high density rubber surround. Ensures maximum linearity and reliability
- Ultra-high energy, high temperature segmented Neodymium magnets
- FEA (Finite Element Analysis) optimized extended contour gap geometry maximizes fringe flux contribution for increased BL linearity and overall efficiency.
- One-piece die-cast aluminum frame with integrated radial fins acts as massive heat sink for the encapsulated Neodymium motor structure.
- CRF™ Radial vent openings between fins and slot openings in motor case allow for cooler exterior air to flow directly across voice coil.
- BL matched, progressive, dual poly-aramid spiders with stitched leads provide superior braking, restoring force, and tear resistance while maintaining near perfect linearity even under max power conditions.
- Massive vented pole piece eliminates unwanted air noise while cooling the motor

DIMENSIONS AND VOLUME



IMPERIAL DIMENSIONS			
DIMENSION	TDX 10	TDX 12	TDX 15
A (Bolt Circle dia.)	9.98"	11.69"	14.80"
B (Outside dia.)	10.67"	12.40"	15.59"
C (Depth)	7.52"	8.01"	9.49"
D (Thru Hole dia.)	9.40"	11.05"	14.14"
Displacement (Ft ³)	0.1	0.13	0.18

METRIC DIMENSIONS			
DIMENSION	TDX 10	TDX 12	TDX 15
A (Bolt Circle dia.)	253mm	297mm	376mm
B (Outside dia.)	271mm	315mm	396mm
C (Depth)	191mm	204mm	241mm
D (Thru Hole dia.)	239mm	281mm	360mm
Displacement (L)	L	L	L

INSTALLATION

Below you will find Thiele/Small data and suggested enclosure volumes for Diamond TDX Subwoofers. The enclosures specified here are offered as a suggestion only. Since enclosure design is as important to sound quality as the speaker itself, it is recommended that your Authorized Diamond Retailer assist you in designing and building an enclosure to suit your vehicle.

For more information on selecting the best subwoofer enclosure, visit the FAQ page of our website, www.diamondaudio.com

HIGH PASS ("SUBSONIC") FILTERS MUST BE USED WITH NON-SEALED APPLICATIONS TO PREVENT OVER-EXCURSION AT FREQUENCIES BELOW PORT TUNING.

The enclosure volumes shown opposite are **NET INTERNAL VOLUMES**. Driver, vent and brace displacement must be taken into account when designing your enclosure.

Model	TDX 10		TDX 12		TDX 15	
	D2	D4	D2	D4	D2	D4
THIELE/SMALL PARAMETERS						
SPL	84.5	84	86.5	86	88.5	88
Qms	3.2	3.1	3.5	3.3	3.8	3.7
Qes	0.60	0.62	0.60	0.61	0.52	0.53
Qts	0.51	0.53	0.51	0.52	0.49	0.49
Fs (Hz)	34	35	33	34	24	26
Vas (L)	15	17.5	22	24	85	75
Cms	0.091	0.095	0.066	0.070	0.095	0.100
Mms	230	205	330	296	465	405
Sd (m ²)	0.0332	0.0332	0.0487	0.0487	0.0785	0.0785
BL (T.M)	18	22.4	21	25	22.3	29
Re (Ω)	3.85	6.5	3.85	6.3	3.85	6.2
Xmax (mm)	22	22	24	24	26	26
Znom(Series) Ω	4	8	4	8	4	8

SEALED ENCLOSURE

Vb (Net vol ft ³)	0.5~1.45	0.5~1.45	0.55~2.5	0.55~2.5	1.4~3.0	1.4~3.0
F3 (Hz)	45~38	45~38	45~34	45~34	40~32	40~32
Pe (Watts)	1000~800	1000~800	1200~800	1200~800	1500~800	1500~800
Qtc (@ max pwr)	1.0~0.8	1.0~0.8	1.1~0.8	1.1~0.8	1.0~0.71	1.0~0.71

VENTED ENCLOSURE (Medium / Small)

Vb (Net vol ft ³)	1.0 / 0.75	1.0 / 0.75	1.65 / 1.2	1.65 / 1.2	0.x	0.x
F3 (Hz)	36 / 40	36 / 40	33 / 38	33 / 38	xx	xx
Fb (Tuning freq.)	35 / 35	35 / 35	33 / 33	33 / 33	xx	xx
Pe (Watts)	800/1000	800/1000	900/1200	900/1200	xxx	xxx
Ports	1 / 1	1 / 1	1 / 1	1 / 1	x	x
Port I.D.	4" / 3"	4" / 3"	4" / 4"	4" / 4"	x"	x"
Port Length	22.5"/17"	22.5"/17"	12"/17.5"	12"/17.5"	xx"	xx"